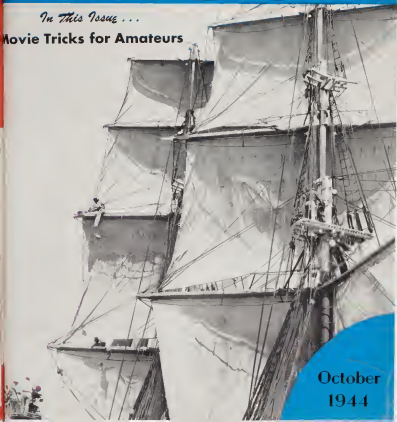


AMERICAN
Cinematographer
★ THE MOTION PICTURE CAMERA MAGAZINE ★

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In This Issue . . .

Movie Tricks for Amateurs



**October
1944**



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THE AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 25

OCTOBER, 1944

NO. 10

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THE FRONT COVER shows Director of Photography Ernest Laszlo, A.S.C. lining up a shot during the filming of Paramount's "Two Years Before the Mast", in which Alan Ladd, Bruce Doolery and William Bendis are starring. This full spread of canvas on 50-foot-high masts was unfurled on the movie ship Pilgrim, an accurate reproduction of the original historic ship. The camera crew and Director John Farrow are high in the air to the left on a camera boom.



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RECORD IT ON FILM



MISS BRAZIL—That was the title conferred in 1940 upon Maria Sular, above, when she competed with hundreds of other Brazilian beauties. She came to Hollywood to play in the motion picture, "Brazil," and has remained ever since. Currently she is seen in David O. Selznick's film, "Since You Went Away." Above photograph by Juan Marquese.

ACES of the CAMERA

Chas. Clarke, A.S.C.

By

W. G. C. BOSCO

MANY and varied, and frequent—is bizarre, are the stories people tell of the events that lead up to the launchings of their respective cinematic careers. But few can claim the distinction, and we spell it that way advisedly of having been launched on Broadway by a succession of offensive women—if we may be delicate about it. In fact, the only man we know who can make such a claim is Charlie Clark, an cameraman for Twentieth-Century Fox, and third v.p. of the American Society of Cinematographers. Just exactly how a few bad apples happened to get Charlie on the road to fame and fortune will be told later on in the article. We could tell you now, but we use this device to get you to read on, and get a gander at the ads on the other page.

Charlie inherited his enthusiasm for photography from his father, who, many years ago, purchased one of those now-forgotten cameras, constructed complete with wet plates, and everything. This is everything but a lack of enthusiasm. Charlie Benson thought it was a wonderful idea; he could see a big future in photography for those who got in on the ground floor, and for those who would properly equip themselves. He could see it all. He had the vision, and he had the equipment. But he didn't have any luck. Something always seemed to go wrong.

Slowly but surely, as each batch of pictures failed to materialize his enthusiasm grew colder and colder until one day, outraged by the poofy of the whole thing, he threw the equipment, wet plate and all, into the trash can. And the subject of photography was henceforth never mentioned in the Clarke household.

It was in such barren soil many years later that Charlie tried to replace the needs of photographic enthusiasm: boys in love, and turned out flame in an advertisement in his Sunday School paper which promised a camera and equipment for only twenty-five cents (!) and hurried darkly at a future in photography.



His father's hobby, which had died of it. The episode had become a dog-pugmat (snore) of his own thwarted ambition, as well as many better memories of the manner in which he had squandered the family savings on his venture into the photographic art. If a very good father he wanted to try and save his son from an expenditure he knew would be better, and so Charlie's first attempt to become a cameraman ended in failure.

There is no doubt that Charlie's father said a lot and made quite an impression on his son, but it was not a very lasting impression because Charlie took the first opportunity that came his way, and next school at the age of sixteen to go to work for a photographer. We got into with the job, but the photographer proved to teach him the business.

Week after week Charlie earned an at his wages, which, waiting as patiently as he could to be mixed into the revenues of photography, to be taught the business. But all he got to do was sort negatives. The only way

later, he did not realize into was the exception, which is no pleasure. And Charlie decided that instead of teaching him the business, they were going him the business. After several months he was only a soldier but no more. So he quit.

He quit just in time to join the army and get into the War, but as soon as that was over he got back into the old groove of working ads. This one he said "I young man to learn the photo and art business." He should have known better, but he took the job when they offered it to him—at ten dollars cash and every week. The salary looked good along Army pay—and he found himself getting into the "photo and art business" via the picture slide route, his particular engagement being the fascinating and stimulating way of cutting pictures out of old magazines and pasting them on glass.

The head slide maker was Fred Gary who at the present time enjoys an enviable reputation as head of Warner

(Continued on Page 348)



Left Fig. 1 Paramount Stereopticon Stereopticon, operating side showing adjustable glass holder and lens mount

High-Efficiency Stereopticon Projector For Color Background Shots*

By Farcot Edouart, A.S.C.**

YEARS prior to the advent of Motion Photography, when Edison invented his Kinetoscope back in 1881, the old "Mages Lantern" with its oil lamp light source, was just the thing for an exciting evening's entertainment. And how well most of us can recall the various stages of development and advancement made through the more recent years, from the kind of lantern-slide pictures we enjoyed so much, to the type of screen entertainment and artistry we now enjoy and demand.

In keeping with the color motion pic-

ture production demands of today, Paramount has designed what we believe to be a most modern and up-to-date type of "magic lantern" or stereopticon projection equipment, incorporating a specially designed relay-optical system, with synchronous heat-absorbing shutter, and powered with the latest type Mole-Richardson projection light source (Fig. 1).

This stereopticon was developed to project natural color slides, in connection with the transparency process on color production, and constitutes a long step forward over the first stereopticon developed at Paramount along the middle part of 1932 for black-and-white transparencies.

The use of hand-colored slides in connection with transparency process pro-

duction has long been used, but at best this method has been far from satisfactory for a number of reasons. First, the basic monochromatic values and density of the plates seldom permit the correct reproduction and richness of true color. There is the ever-present problem of coloring the slides correctly and evenly for enlargement to a screen picture of any size, a job requiring the most meticulous skill, care and patience. Then there is the difficulty of securing stable non-fading color pigments and dyes that will stand the heat and intensity of the Super-8s are light. Added to these, there is the troublesome problem of securing heat-resistant, unbreakable glass plates that will stand the terrific heat necessary for sufficient light to rephotograph in color. These are just some of the problems of using artificially colored plates.

Obviously the best solution to the problem was to project and photograph natural color. To do this required 3 major steps, such in itself a major necessary link in the accomplishment of the whole.

(1) The duplication in quantity of correctly distorted, non-fading natural color prints $3\frac{1}{4} \times 4$ inches in size. In this connection, it must be realized that the light source, condensers and optical system, slide glass, and the translucent projection screen used all act as a cumulative filter on the projected image. Therefore, the slide reproduction must be distorted in color to allow for this, so when finally projected the image should appear in the correct color balance to the camera as originally intended.

(2) The transferring of these duplications to a heat-resistant glass, water clear and free from bubbles or strain, and cemented in a manner to resist the most intense heat without peeling or separating from the glass support and causing Newton-Ring effects during projection.

(3) The designing of a unit to project the $3\frac{1}{4} \times 4$ in image with sufficient light intensity to adequately rephotograph in color. This required a light source and optical system producing the maximum efficiency, and required all the heat reducing and cooling elements we could employ, at the same time securing a minimum amount of light and causing a minimum of color distortion.

The light source provided for operation of the stereopticon consists of a Mole-Richardson lamp house designed to the Academy Research Council Process Projection specifications, and has specially condenser elements composed of a primary system consisting of a quartz plano-convex condenser exposed to the arc, and a pyrex double-convex condenser. These in turn are focused on a circulating water-cool system consisting of 2 plano-convex condensers of optical crown glass, which in turn are focused into a field condenser system large enough to fill the $3\frac{1}{4} \times 4$ in. slide.

* Reprinted from Journal of Society of Motion Picture Engineers, August 1934.

** Director of Transparency Division, Special Photographic Department, Paramount Pictures, Inc., Hollywood.



The evaporation condenser water-cell is equipped for the introduction of filters such as heat absorbing, color distortion, or neutral density, mounted on a slide that drops into a set position covering the full light ray. They may be added or removed as desired, depending upon the exposure used, whether the slide being used is of non-breakable glass, or whether the color ratio is required to be altered. The cell uses circulating deaerated distilled water to eliminate air bubbles from forming on the inside glass surfaces during operation, and is circulated by pump through a fan-cooled radiator (Fig. 2). The capacity of the cell circulation system is approximately 2 gallons per minute with carboxyl liquid volume totaling approximately one-half gallon.

The circulation part of the equipment is a dual system, mounted in a case on the base of the stereopticon and connected by flexible transparent plastic tubing. This mounting, in addition to the cell circulating and cooling system, also contains the circulating water and cooling system for the lamp house, as the positive carbon-mounting unit in the Hale-Richardson lamp house is always kept down to hand-touch temperature, even while operating at 220 amp.

The heat-absorbing glass used in the water-cell when occasion demands is the unusually effective glass developed by Dr. Tillyer, designated as "Phosphate Heat-Absorbing Glass."

Given the physical characteristics of this glass, it is most essential that it be utilized in such a manner that the entire area of the screen be subjected to heat of a relatively uniform level. Because of the comparatively high coefficient of thermal expansion, coupled with a low degree of elasticity, lack of uniformity in heat absorption over the area of a piece of this glass is most likely to result in fracturing.

Immediately adjacent to the outside of the water-cell, in the path of light between the cell and field condenser unit, is mounted a heat-absorbing shutter ap-

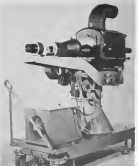
Top left: Fig. 2. Front-mount transparency slide within cooling cell, showing of condenser unit for water-cell and lamp water circulation.

Top right: Fig. 3. Front-mount transparency slide within cooling cell, showing of control system showing water cell heat-resisting superheated glass filter and field condenser system for plates.



Right corner: Fig. 4. Permanent transparency phosphorus spreading slide showing control panel at Hale-Richardson lamp spreader system and telescope.

Bottom right: Fig. 5. Permanent transparency phosphorus spreading slide and electrical hookup.





Francis Doublier, Cameraman Fifty Years Ago

By IRVING BROWNING

WHEN I do homage to my good friend Francis Doublier, it is because I respect and appreciate his contribution to the motion picture industry, for at the turn of the nineteenth century, he received a motion picture camera, which he took with him when he toured the European continent and Asia to make a documentary record of people and places to be seen and enjoyed throughout the world.

Imagine yourself a part of this interview, listening to him, for like most Frenchmen, he still retains his accent and it is as pleasant as Charles Boyer's. I wanted to do this story for him, for I have known him for many years and like myself, he is a historian and collector of "Cinematographs" and we enjoy discussing and telling each other about our new accessories. At this time, the motion picture industry is celebrating its fiftieth anniversary and this year too, France is celebrating the fiftieth year of his entry into it.

He was born in Lyons, France, on April 11th, 1878, and went to work for Auguste and Louis Lumiere at Lyons in 1894, as a laboratory helper, at the age of sixteen. At that time, the Lumiere brothers, besides being manufacturers of photographic supplies, were also experimenting with motion pictures. Until that time all of the experiments were using the bellows movement in both camera and projector and because of its under-dress the Lumiere brothers decided that if they could not develop a more steady movement, they would rather forego making any motion picture equipment at all.

Because of illness, Louis Lumiere was kept in bed and three he planned and

designed a new movement. Calling on his brother Auguste and his chief engineer Charles Mesnais, he related to them his idea. It was immediately put into use and developed to be the one movement which was copied later by many of the camera and projector manufacturers.

Francis did all the chores in the laboratory. When he started the gag of sewing the new kid out for a pair of spookier holes had not yet been invented. Several of the Doublier family were already at work at the Lumiere plant. One of his sisters was manager of the manufacturing of photographic plates, another sister was a bookkeeper and a brother was an electrician. His brother was still working there when in 1941 Francis, the youngest, was the last of the family to be employed there.

On December 28th, 1905, he was sent to Paris, as assistant to the projectionist, and there he was present at what was the very first commercial showing of motion pictures on a projected screen. Admissions were 25 cents and the show lasted twenty minutes. The show consisted of fifty-five to sixty foot lengths of films of trains, cavalry, street scenes, etc., with one minute between reels to change film. This show antedated Edison's Kinetoscope showing which took place in New York City, on April 23rd, 1896. The first public projected film show at the Grand Viteaucope projector took place four months later.

In February of 1896, Lumiere sent Doublier to Brussels, Belgium, to show films at the Galerie du Roi. There he rented and set up seats and a 5 x 6

Top left: Scene at the Grand Opera House made in 1895 by Francis Doublier.

Top right: Scene in front of the Lyons Grand Opera House by Francis Doublier in 1895 and used by Francis Doublier to be the first photographed motion picture to be actually shown on a projected screen. It was photographed by Louis Lumiere.

Below: From a place of film of the Cameraman of Carl Mielke made in Moscow in 1896 by Doublier.





Where The Lumiere camera made very short an exposed film on top and the take up reel inside. The film was taken up by hand. Such films in no sense which was hardly necessary in the camera carried only from 10 to 20 feet of film.

Top right: Francis Doublier demonstrates how he used his camera as a projector as his first as both cameraman and projector from 1895 to 1902.

foot screen. Then they put up a wall behind which the projector was placed, not for fire prevention, but because they made a solemn promise before they left Lyons that no king or queen or anyone else would ever see the mechanism of the camera-projector. All motion picture apparatus in the early days, was secretly guarded because there was always the danger of a lawsuit because of patent infringements or new competitors. Both being undesirable, they allowed no one to view the equipment. The public always anxious to see what made the picture move, often offered bribes to Doublier.

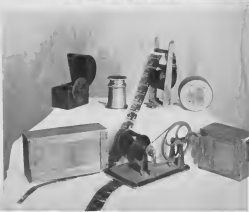
Several weeks later, Lazzaro sent a man to replace Francis with instructions for him to leave immediately for Amsterdam, Holland, to open a show at Kalver Straat. On his arrival he went about as usual renting seats and a store with electricity, to supply the energy for the projection light. He later the tremendous headache he encountered with AC current. After running a one minute film the rheostat became red hot. He would hold up the show until the rheostat cooled off, while the paragon sat in the dark. When he was fortunate to rent a store with DC current, a smile beamed across his face as he made comparisons between danger and pleasure. If screen credits played an prominent a part then as now, the credits would read, cameraman, projectionist, laboratory technician, advisor, actor, director and hawker. Besides all this, Francis later became a manufacturer of photographic materials.

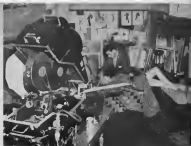
(Continued on Page 142)



Right center: Francis Doublier in his basement museum where he keeps many historical pieces of motion picture equipment, most of which is now almost useless for a few similar pieces of special museum.

Bottom: Some of the equipment used for photo projecting and adding films in 1895. Note the round the film carriage used in the camera when the camera was also used as a projector. The film, too was the forerunner of the present 35mm film and carried a complete subject.





Top left: Producer Hunt Stromberg shows a scene in "Guest in the House" from behind the camera. Clearly to his left is Sharper of Photomath Lee Garmes. Unseen character behind him is subject cameraman.

Top right: A make-up artist applying finishing touches to Marjorie McDonald's make-up for one of the cameraman's "Guest in the House".

Filming a Motion Picture In One Set

By ROBERT JOSEPH

To the man who photographed the romantic dunes and coasts of the Sahara, the colorful, bizarre borders of Shanghai, the wild and scrubby hinterlands of deepest India, and the triumphant mission of Poland by the German Wehrmacht—the most exciting film assignment of his career has been the photographing of an Artist's sequestered Maine home.

The photographer in question is Lee Garmes, ASC, who found that North Africa and Poland had their ramblers—but it was the confining interior of a New England cottage which proved the most challenging and most interesting assignment of his career. Specially Directed of Photography Lee Garmes is referring to Hunt Stromberg's "Guest in the House," a picture which is played except for one or two riser scenes, inside a home.

"The thought might occur to some people," Garmes explains, "that working within four walls for ten weeks can get pretty dull for the technician. This doesn't happen to be true. The very fact that we made 'Guest in the House' in substantially what was one set was a challenge to our imaginations and ingenuity. And when this picture emerges on the screen the audience will be gripped by a dramatic, absorbing story, and visually entertained by looking at a house that is as real as any that has ever been photographed for pictures."

The set for "Guest in the house," designed by Nikola Zernoff, is supposedly the home of a retired sea captain who carried the living quarters of his ships

over into his house. That called for low beamed ceilings—seven feet high—which Garmes characterizes as the lowest ever used in any picture of which he has knowledge. The low ceilings, which served to create an atmosphere of friendliness and homelike feeling, also imposed technical limits. This picture, as Garmes states, was not an easy one to photograph, and constituted the most difficult assignment of his career. But the final effect—the recreation of a four-walled house in contrast as well as spirit—was well worth the effort.

To Garmes and his chief electrician Homer Plazette fell the problems of making one set continuously interesting. "Deep Shot," which means that all the characters at different distances from the camera lens were constantly in focus, the appearance of the low beamed ceiling in most shots; the highlights and shadows which were omnipresent because of the relatively close quarters in which the story was filmed—all these served to make "Guest in the House" dramatically and visually interesting.

Another problem which faced Garmes was the simple one of the sky-outside beyond the windows. Sharp, clear clouds were gotten by using a so-called "cloud machine," which created interesting cloud formations, serving to heighten the visual effect.

There were numerous problems, lighting problems, and the light house problem, which, from a technical point of view, was probably the most difficult of all. The house which Ralph Bellamy as Douglas Proctor owns faces the sea, a few miles from a Maine lighthouse.

For all of the night shots in the film a light house beam had to sweep across the house, through its windows at periodic intervals. Because of cutting needs special timing had to be devised so that the revolving beam would throw its light at night-scene periods. This was precision lighting of the highest and most exacting order.

But then brain-twisters in the realm of photography are old stuff to Cinematographer Lee Garmes, who came to films in 1916 when he served as an assistant cameraman in an early Dorothy Gish-Richard Barthelmus film. After graduating from a Denver, Colorado, high school, in 1918 Garmes and the family moved west to the film city.

Garmes' first important film assignment came several years later when he was working with Director Moll St. Clair on an early Adolphe Menjou vehicle, "The Great Barbers and the Barber." Garmes devised a new lighting technique—using mirrors bulbs instead of the generally used carbons—and through his creative lighting drew great attention to the picture, gave Menjou an important start in his career. By rigging up two bulbs made of a tomato can for a reflector, and by adding or decreasing the number of these lights Garmes achieved light variations and various light values. The experiment was revolutionary and set a new style for lighting films from that time heretofore.

Garmes went on to photograph the first screen version of "Garden of Allah," for Rex Ingram in the early twenties. In 1922 Garmes was the credited Academy Award for his work on "Shanghai Express," and he also photographed and co-directed two experimental films with Ben Hecht and Charles MacArthur, "Crime Without Passion" and "The Second!" motion pictures which relied largely on the sense of mood established by Garmes' ingenious lighting.

In Hollywood Garmes served as director of photography for Alexander



Top left: A THUNDERING ARGUMENT OUTBROKE BETWEEN Marv McDonald and the camera

Top right: Cameramen Lee Garmen looking down through the camera at Anne Baxter and Jack McElroy as working in close quarters making this scene

Right center: Director and cameraman Lee Garmen in close quarters with cameraman Stuart Lewis Mitchell as it is the case with Garmen seated in foreground and crew in the background as they are directed by Garmen

Bottom: Director Lee Garmen, left, plans and action. Cameraman Lee Garmen holds camera finder and sketch artist Lee Thomas, in right of Garmen, makes the scene during proper director rehearsal of Garmen in the House

Korda on "Lydia" and "Jungle Book," and more recently photographed "Nene Shall Escape," story of the Nazi invasion of Poland, directed by Andre A. Toth, a film craftsman whom Garmen considers one of Hollywood's most talented cameramen, now under contract to Stromberg. Here, too, was a picture which depended to a large degree on effect achieved through imaginative lighting.

His present assignment, "Guest in the House," which Garmen calls the most exciting and difficult of his career, has also been the most exciting, chiefly a result of a successful experiment in pre-production planning, the harmonious operations of Director Lewis Milestone, Art Director Nikolaus Resnais and the photographer himself. Together the three planned every phase of the film, working as a unit.

"I'm in a corner—intensity and figuratively," Garmen states about his recent picture, "and that's when I do my best work."

Under long-term contract to Hunt Stromberg, Garmen will also act as director of photography on "Disheveled Lady," his next picture.





Last month the 18th AAF Base GSB, Calver City, Calif., formerly the First Motion Picture GSB, was elected to end the photographic contest open only to enlisted men. Judges for the contest were Clarence Bell, Maj. Ray Jones, Universal, and John LaRue, Johnson Picture.

The upper picture on this page titled "Warrior", was judged BEST OF SHOW. It was made by Pfc Herbert P. Bond, whose name is at DTP, Eighth Air Force, Fairbank, Calif.



The bottom picture, titled "Gliders", was first prize in the miscellaneous division. It was made by Pfc Bond, who is in the special effects department of the Base GSB.



"Survival"

By E. S. ROBERTS

OVER far-flung fronts the training and fighting personnel of the Royal Canadian Air Force meet the hazards of weather and every action. A forced landing may result through no fault of aircrew. A successful outcome depends on the adaptability, initiative and ingenuity of aircrew. Only the fit survive.

These are the commentator's words that set the stage for the lessons being taught aircrew in a new motion picture "Survival". Produced by Associated Screen Studios for the medical branch of the RCAF, the picture is six miles in length, in full color.

For those who have never "taught it" is the best, the motion picture will be particularly valuable, by bringing alive situations set forth in the RCAF text book on "Land and Sea Emergencies". Even for the more or less experienced woodsmen there are useful and perhaps surprising tips illustrated.

"Survival" was produced in cooperation with the National Research Council of Canada, and an RCAF executive on flying clothing and emergency equipment. The picture demonstrates many of the war's new developments in life-saving equipment—special food and medical kits, articles of clothing and signalling devices. Above all this, the airman is taught to be resourceful in using materials that may be ready at hand from the crashed aircraft, and to seek food that nature provides.

The need for sane and ordered procedure in an emergency is stressed in the film, and morale will be strengthened for any airman forced down in strange territory when he remembers the promise the picture makes of diligent rescue efforts by those watchers who follow his flight.

Production of the film was supervised

by S. I. Morley Williams of the medical branch, RCAF. Earl Clark of Associated Screen Studios was in charge of camera work, while P. L. Gordon, Algonquin and Will Ross Longwood were technical advisors.

During nine months of production, three separate aircrews were employed, and a large number of RCAF personnel, ground, air and marine were at one time or another employed at various locations to give a realistic portrayal of problems of survival.

It might be supposed that with A-1 Force meteorological service at their beck and call, shooting schedules could be neatly arranged to obtain the best possible conditions for shooting exterior Kodachrome. The different scenarios when nature balked the "net" boys set off in sharp relief the average high quality of their prognostications, by which schedules were set.

Cape Breton Island is surrounded on three sides by the Atlantic Ocean. Some queer weather is looked around there, and during officially-recorded 18 hours of November sunlight, 2000 feet of film had to be exposed. The production unit had been waiting for ten days, when the meteorological section promised positive sunlight. The photographic crew had put out to sea, the Navy sent out collaborating craft, two aircraft were readied. For five hours 32 personnel and precision equipment stood ready for the shoot to clear—Nothing happened—At noon the "net" section was contacted to check on their promise of sunlight. All they could report was that 200 miles away there wasn't a cloud in the sky, a high pressure area extended westward over Canada to Winnipeg; by all the rules Cape Breton should be clear—but no sunlight appeared that day.

For the winter sequences, considerable

Above, left: Back to a cabin after losing the lessons of "Survival" (over the production crew and members of the Royal Canadian Air Force) left to right: AC P. C. Johnson, AC G. A. Smith, P/L N. Algonquin, Earl Clark, double camera man, WO R. S. Longwood, first cameraman, Associated Screen Studios, AG, L. J. Goss.

Right: Showing methods of signaling to rescuers, aircraft under all manner of conditions may save the life of a stranded airman. Planning diagrams in the snow to form a "V" means medical emergency.

visely was given the selection of a location that would be at once picturesque, and could be expected to retain some or less constant background settings throughout a period long enough to complete all the scenes required. Mount Tremblant was chosen. For as long as local residents could remember, the mountain had retained its formidable winter dress until late spring. Perpetual condensation in average temperature of 25 below zero at the summit holds two-foot blankets of white on even the smallest set of trails. Snow reaches a depth of 15 feet underfoot. A suitable farmland setting was the joy of the camera crew to the tune that one half the film on winter sequences was in the can. But camera operators and trouble seem to have a fascinating attraction one for the other. One horrible morning the crew crawled out of their sleeping bags to find all trees denuded of their frosty coats. The whole expedition had to be called off until the three o'clock, cold returned and had a chance to rebuild the heavy coats of white.

When the winter sequences were at last complete, the crew returned for Montreal laden with packs, snowshoes and boards. "At last! No more snow water, no more spore beds, no more mistakes! Civilization again, food and friends! Happy day, our troubles are over!" Just before Montreal was reached, the train jumped the rails, the bar-woodmen retained to characterize, packed their equipment on their backs for the last half mile to the station.

Actually, the film "Survival" demonstrates three varying circumstances under which Canadian flyers in distress

(Continued on Page 254)

THROUGH the EDITOR'S FINDER

WE tip our editorial hat to the Hollywood office of J. E. Brudshaw, Inc., E. G. Blackburn, Vice-President and General Manager, and all the members of the Brudshaw staff for the service they are offering the families and friends of cameramen and photographic technicians in the Armed Forces, unemployed elsewhere in this magazine.

We all know that our boys in the Armed Forces, especially those on foreign soil, will be looking forward to receiving Christmas presents from home come next Christmas day. We all know that these gifts must be very securely and properly wrapped and addressed for mailing, so they will arrive in good condition. Securing the proper cardboard and wrapping paper, and following the postal rules to the letter is quite a task.

The Brudshaw organization offers to do all the wrapping and addressing, and mailing free. All one has to do is take the gifts to the Brudshaw Hollywood office and give the necessary information as to where they are to go, value and name and address of the sender. The Brudshaw office does the rest—except to furnishing the postage free. AND—best thing of all—The name of J. E. Brudshaw will NOT appear either inside or outside the packages. This proves to this writer that the service is not an advertising stunt, but is a real service sincerely rendered by every man in the Brudshaw organization. We happen to know that the Brudshaw staff has volunteered to remain at the office every night until October 15th (deadline for sending gifts overseas) as their OWN TIME to wrap these Christmas gifts. That's SERVICE that deserves commendation.

LAST month this writer touched upon the subject of giving cameramen more prominent screen credit, especially on important motion pictures.

We suggest it again, and will continue to suggest it until some wise production head sees the light and recognizes the importance of the cameraman in the making of motion pictures.

The Academy of Motion Picture Arts and Sciences honors the cameraman each year when giving a famous Academy Award of Merit. The Academy presents the same sized "Oscar" to the cameraman as it gives to the best actor and for the most outstanding motion picture. If the Academy recognizes the worth of the cameraman, it would seem logical that the film producing companies would do likewise, and instead of burying the cameraman's name in a maze of 10 to 20 other individuals who perform minor duties, would give the cameraman a separate credit title similar to the director and the writer. After all, if it were not for the cameraman there would be no picture on the screen.

WITH the end of the European part of the war approaching closer and closer, men in the Armed Forces are beginning to wonder what is going to happen when they come back home. Will they get their old jobs back, or will they have to walk the streets looking for new ones that do not exist? In Hollywood some are wondering what will happen to the cameramen when they come back from the war.

"Will the picture industry repeat what happened after the last war, or will they give the returning cameramen back their jobs?" one important Director of Photography asked me the other day.

Then he told me of his experience after he returned from two years of war against Germany.

"I went in to see a producer about photographing a picture he was about to make," the cameraman said. "Well, what was your last picture credit?" "I explained to him that I hadn't made a picture in two years because I was over seas in the army. That producer told me he was afraid to take a chance on me because I probably had forgotten a lot of lighting technique in two years. So it went with other producers. Finally, although I was a first cameraman, I had to get a job as an assistant and start up the ladder again. Is that what is going to happen this time? If it is, then somebody should do something about it."

It is a problem that must be solved, and the only way to solve it is to give the returning cameramen their jobs back. They have given up their high paying jobs to enter the service—many of them away from draft age. Practically everyone of them volunteered. A number of them have given their lives. When they return they should return to those jobs. If they don't, then they have fought a war in vain.

The union says it will revoke the war-time permits issued to men who have replaced these combat cameramen. Will the production officials be willing to put them back on the cameras, or will they ask them about their last picture credits?

THE Martin Drug Stores of Tucson, Arizona, are compiling a unique record as part of their war effort. Since June 30, 1941, the Martin photographic department has "shot" all inductees selected by both local draft boards. The "shootings" has taken place at the Auditorium of the Maupin McDermott Pool of the American Legion in Tucson as the inductees are sworn in, and has been done with a 16mm. movie camera on color film. Each film has attached to it a 16mm. scroll title showing an accurate list of the names of all selectees who have been "shot" on that particular film.

A. P. Martin, owner of the Martin Drug Chain of 7 stores in Tucson and Casa Grande, Arizona, conceived the idea

and the Martin Drug Co. is financing the entire project. Mr. Martin, a veteran of the first World War and a member of one of the local draft boards at the present time, believes that a visual record of the thousands of selectees from Pima County will be of great interest to these boys and their families in years to come. The films, of course, will be available free of charge.

The inductor films are filed on 400 feet reels, with four to six induction ceremonies to each reel, depending on the number of inductees to each ceremony. Some 20 reels have been accumulated and carefully indexed and filed. The films have already been shown to interested families of selectees and to some of the boys in service who have been home on leave. A grand idea, Mr. Martin, we congratulate you!

H ERES a friendly tip for some advertising agency who has a client looking for a triumphant radio program that is really different.

The other evening this writer had the pleasure, and we do mean pleasure, of listening to the first of a proposed 26 15-minute episodes of a radio program which is called "This Is Television," written by Robert L. Douglas and produced and directed by Michel Mamaty. At its conclusion we asked that the recording be played again.

The program gives an amazing idea of what will be happening in American homes when television is actually perfected and brings the world right into the homes of Mr. and Mrs. United States. One sequence in the first episode depicts an old lady who has been waiting forty years to be able to go to California and watch the return of the swallows in the Spring in Capistrano. And now she sits in her rocking chair in her own living room and both sees and hears the birds returning. Douglas has done a peerless job of dialogue writing.

Tying each sequence together is the soft, soothing, dreamy voice of "Television" delivering a commentary of a quality seldom equaled on air programs that this writer has heard. Hearing a very competent cast with beautifully trained voices in film actress Early Carlton in the role of "Television." Bette Davis, noted stage actress, and David LeClair, well known on stage and radio, play two of the most important roles.

As we said at the start, this is a program that is really different, and one which holds its listeners. It should be right down the alley for any company whose product is connected in any way with radio or television—or anything else, for that matter. This writer is so impressed with it that he happily gives the information that anyone interested in hearing a recording should write to Michel Mamaty Productions, 7354 Melrose Avenue, Hollywood, Calif.

A Christmas Thought

and Service
for OUR CAMERAMEN
who are serving
Our Country——

To all families and friends
who are sending Gifts and
Christmas remembrances—NOW—

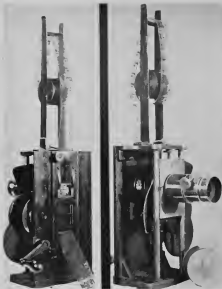
Bring them to Brulatour
(with your card or greeting)

We'll Wrap Them
Pack Them Carefully
and send them on their way
under your name and address
as the sender ——

Bring in Your Gift
His Name and Address
We'll Do the Rest
C h e e r f u l l y ——

J. E. BRULATOUR, Inc.
6700 SANTA MONICA BLVD.
— HOLLYWOOD —

HILLSIDE-6131



Top left: The first on-screen movie camera projection, made by the Lumiere Cinematographe at Lanta, France. The movement is the same as that in the camera. Note that there is no lens. The film usually is from 10 to 15 feet in length, run from above into the box below. Below: the mechanism in the camera. Francis Doublier and the camera with which he started his cinematographic career fifty years ago.

Francis Doublier

(Continued from Page 135)

Early audiences became pensive and fell backwards when the cavalry charged forward, some of them getting up and running out, never to come back again. It was necessary for the manager to come forward before each show and assure those seeing a moving picture for the first time that the people, horses and trees in the film, never leave the screen and pleaded with the audience to stay in their seats until the show was over. Thus they encountered in every country they visited.

Soon after Francis received notice he was to go on his most important mission, that of photographing a great event in European history, the Coronation of Czar Nicholas II on May 26, 1906. Equipped with two cameras and projection equipment, he and a manager arrived in Moscow and set up an auditorium. Then he went out to make arrangements for photographing the Coronation. It was announced that two days after the Coronation the Czar and Czarina would meet their subjects and souvenirs would be distributed. This event was to take place at Hodyrsky Place, northwest of Moscow. One half million subjects crowded the Place, all anxious to witness one of the Czar's souvenirs. Doublier, intent on getting a souvenir for himself, set up his camera on the roof of a two story building and having his assistant with it, went down after the souvenirs, a sword and a cup with portraits of both the Czar and Czarina with the double eagle. Immediately after his return the crowd began a mad rush for the souvenirs. A tide of men and women surged toward the building, pressed through the ropes and into the street and once the temporary barrier in front of the house where the camera was set up. Ends of timber tilted up like the ferocious jaws of an alligator and crying Russians went down into the excavation.

Across the place, the great crowd surged forward, the stronger forging ahead of the weaker, many were trampled to death. This happy occasion became one of the greatest tragedies of its time, for when the souvenirs were finally exhausted, it was said that there were only about 1000, they found six thousand bodies trampled and crushed. The police caught up with Francis and his assistant after it was over, and



(Continued on Page 134)

"PROFESSIONAL JUNIOR" TRIPOD WITH REMOVABLE HEAD



*Patent No. 2318910

The friction type head gives super-smooth 360 pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor. The large pin and traction assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and E & H Eyemo (with motor), and with or without alignment gauge.

The tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest. Also available are heavy fibre carrying cases.

Above—The E. K. Cine Special Camera Mounted on the new Professional Junior® Tripod.

Tripod Head Unconditionally Guaranteed 5 Years. Write for Descriptive Literature!

"Professional Junior" Tripods, Developing Kits, "Hi-Hat" and Shifter Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Base Signal Corps, Office of Strategic Services and Other Government Agencies as well as by many leading newsreel companies and 16mm and 35mm motion picture producers.



Above—Collapsible and adjustable telescoping metal triangle. Extends from 18½" to 36½". Has wing locking nuts for adjusting leg spread and stud holes for inserting pins of tripod feet. Triangles prevent damage to scene cameras so that their equipment remains in correct position and will not slip on to make any type of surface.

Left—16mm Eyemo with motor and 400 ft magazine mounted on "Professional Jr."

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY



Fairchild Announces New Type X-Ray Camera

AN ENTIRELY new type X-ray camera, incorporating many unusual features, has been announced by Fairchild Camera & Instrument Corporation of New York. It was shown for the first time at a combined annual meeting of the Radiological Society of North America and the American Roentgen Ray Society, in Chicago September 24-25.

Fairchild has designed and is now producing this photo-fluorographic camera for installation in X-ray equipment of several manufacturers, who had expressed their desire for a better instrument to provide record negatives of images appearing on the fluoroscopic screen. It is expected that the camera will be marketed on a week-day basis.

Important features of this fully-automatic camera are that it takes images 2 1/4 inches wide by 2 1/2 or 3 inches, dependent upon the type of compression in which it is installed, on 35mm roll film; it has an exceptionally fast lens, f/1.5, especially built for Fairchild by the Bausch & Lomb optical works; there is a reversible film magazine; a pressure plate of the type used in some of the Fairchild aerial cameras holds the film flat in the focal plane during exposure; and, a film feed signal informs the user the camera is in operation, and provides for stopping the camera in case the film is not moving. There is no shutter; the exposure is made for the length of time the X-ray is turned on.

Prior to the introduction of this Fairchild model X-ray camera on the market generally were the 35mm roll film type or the 4"x5" cut film variety. Advan-

tages cited for this, the first 70mm X-ray camera, are many. For example, recognized medical authorities have informed the Fairchild company that in viewing film pictures through magnifiers, trained readers checking for tuberculous spots as many as 10 per cent of the positive camera; that inexperienced readers have missed up to 20 per cent of the positives.

In the Fairchild 70mm camera it is expected that in the majority of cases the negatives can be read accurately without benefit of magnification.

Against the 4"x5" camera, the Fairchild unit shows great savings in time and costs. As many as 480 negatives can be had from one standard 166-foot roll of film, as film operator, necessary in taking photos with the 4"x5", is eliminated; one person can do the quantity viewing of the 70mm negatives on their roll. While three persons are required for speedy reading of the 4"x5" cut film negatives and, film costs are greatly reduced.

The new Fairchild camera comes at a time when the U. S. Public Health Service is preparing for the biggest offensive yet undertaken against tuberculosis. There are at least 1,500,000 consumptives in the United States, and though the tuberculosis death rate has been reduced, it still kills more people during the 15-35 year range than any other disease.

The tuberculosis death rate in 1944 turned upward for the first time in decades, and Congress promptly passed a bill authorizing a new tuberculosis control division at the Public Health Service. It is in charge of Dr. Herman Kretzschmar, the Navy's chief T.B.

The new Fairchild X-ray camera is shown at left.

consultant, whose biggest weapon in the fight will be the mobile X-ray machine, with which he hopes eventually to photograph every chest in the country. The idea is to catch suspect cases, which can be cured without drugs, and at the same time round up the many persons who though they are in the advanced stages don't know they've been hit by tuberculosis at all.

Anso's New Color Sheet Film Now Available to the Public

Anso's new Color Film, designed for processing by the user, is being released to amateur and professional photographers throughout the country for the first time since it was put in production for the exclusive use of the armed forces and war industries.

Company officials at the same time announced that special Developing Outfits for individual processing of the film also are being placed on the market.

Only film in sheet sizes will be available for the present.

Anso Color Reversible Film was given its first public showing in New York City this summer and a limited supply was released at that time for distribution in the metropolitan area.

When the film was first introduced publicly, Anso officials were unable to predict when it would be possible to release the film on a national scale. However, production schedules have been rearranged which make it possible to place this new type of color film in the hands of Anso's dealers from coast to coast.

No priority is needed to obtain Anso Color Film now although the military and essential industries will continue to have first call on the volume being produced.

Advancement of Anso Color Reversible Film from its laboratory to market stages was aided by the photographic demands of World War II.

Requirements of Army Air Forces, as well as other branches of the armed forces, added impetus to the perfection of Anso Color Film and its unique advantage of "on-the-spot" processing without the delays entailed by returning it to the manufacturer.

The new film's practicality also was demonstrated when military officials and manufacturers of secret war devices found it expedient for national security to make full-color transparencies within their own headquarters.

For those who do not wish to do their own processing, such service is available through Anso's dealers. Special facilities have been installed in the Anso Color Laboratory to maintain rapid service to the dealers.

*"Perfect cinematography and modern
arcs are inseparable."* Karl Struss, A.S.C.



BUY UNITED STATES WAR BONDS

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation



General Office: 30 East 42nd Street, New York 17, N. Y.

Division Sales Offices: Atlanta, Chicago, Dallas, Kansas City, New York, Pittsburgh, San Francisco

AMONG THE MOVIE CLUBS

Syracuse Elects

Newly elected officers of the Syracuse Motion Picture Association for the coming year are: Roy E. Polton, President; Arnold D. Hodges, Vice President; I. Elina Gell, Secretary; Lyle Cowen, Corresponding Secretary; Stafford N. Olney, Treasurer; Roy Farnsworth, Sound Technician. Elected to the Board of Directors were: Maurice Schwartzenberg, Earl Abbott and Paul Hyland.

The club has just announced that it has acquired new permanent quarters at 445 James Street, across the street from the Syracuse Museum of Fine Arts. From now on the club rooms and facilities are available seven days a week to all members. These facilities include a darkroom and processing laboratory equipped either for reversal or negative-positive processing and printing; an auditorium equipped with sound stage projection booth and tables; permanent bonded glass six-foot screens and a workshop.

San Francisco Club

The Cinema Club of San Francisco held its September meeting on Sept. 14, at the Western City Club.

Feature of the meeting was the screening of "This Is Alaska," an unusual film photographed by Mrs. N. B. Bruckner, wife of Major General Bruckner, commander of our troops in Alaska prior to Pearl Harbor. Mrs. Bruckner took advantage of her stay in Alaska to film the scenic beauties of the territory and its varied activities, even a salmon hunt. Her film is of such excellence that universities have given it special showings.

Some of the club's new films were reviewed, and a member of the staff of the San Francisco Zoo was on hand and outlined a number of animal exhibits now at the club members when they next visit the Zoo.

Utah Cine Arts Club

Feature of the September meeting of the Utah Cine Arts Club was an illustrated lecture on composition by Dr. C. E. Barlett, President of the Club.

The remainder of the evening was devoted to the screening of "South of the Border," and the films made by club members at the annual club picnic held on August 28.

Minneapolis Club

The 1944-45 season of the Minneapolis Cine Club got under way with its September meeting in the Rousesville Room of the Andrews Hotel. A program committee consisting of Bill Rock, Chairman; Bob Kewenaw, Al Lindemann, Fred Graham, Falemar Thomas and Allen Fahr was appointed to plan the programs for the year's meetings.

L. A. 8mm Club

Five films made up the screen program at the September meeting of the Los Angeles 8mm Club, held at the Bell & Howell Auditorium, Hollywood.

The films were: "Florida Vacation," Kodachrome by Mr. Hornaday; "Music and Memories," Kodachrome by L. B. Ford; "Caught in the Act," a 16mm picture by Mr. Clemmens, and a War Department film depicting the part industry is playing in the war.

Fred Evans, Claude W. A. Cadarette and John E. Walzer were named by President Milton B. Armstrong as nominating committee for the forthcoming annual election of officers in November.

Saint Louis Club

Three films were screened at the September meeting of the Amateur Motion Picture Club of Saint Louis. They were: "Eastern Coastline," a very interesting picture made by George Kysore covering the eastern coastline from Delaware to Nova Scotia; "Your Mark See Spots at Moose," in Kodachrome by Ed Gelchauer, and "Social Life," a film of the club's Second Annual Picnic, made by Club President Paul Schultz.

Southern Cinema Club

Members of the Southern Cinema Club combined fishing, racing and filming on Sunday, September 24, when they staged a hot fry at the Rainbow Trout Farm, Azusa, California. They caught the trout, they fried them, they ate them, and they made motion pictures of the entire proceedings.



SOUND

La Casa Movie Club

The La Casa Movie Club of Alhambra, California, is rapidly becoming one of the largest and fastest growing movie clubs in America. More than 300 were in attendance at the September meeting, and 225 were on hand for the August meeting.

Three films were screened at the September meeting. They were: "The Magic Carpet," filmed by Leon C. Spingarn of the Southern Cinema Club; "Flowers," by Dr. G. B. Baird, and Eastman Kodak's beautiful documentary film in color, "Eighteenth Century Life in Williamsburg, Virginia."

Philadelphia Cinema Club

Four outstanding films featured the September meeting of the Philadelphia Cinema Club, which marked the start of the club's 1944-45 season.

Films shown were: "Casalcade of Color," in Kodachrome; "The Dutch Tradition," a black-and-white film depicting Holland in an entertaining manner; "A Man A Dog, and a Gun," and "18th Century Life in Williamsburg, Virginia." All films had sound.

M.M.P.C.

The first meeting of the current season of the Metropolitan Motion Picture Club was held at the Hotel Capital, New York City, on September 28.

Films shown were: "Rainbow Paragon" by Charles C. Barnowick, and "Hudson Valley Apples," an interesting Kodachrome film by James N. Whitaker. Also shown was an unedited and unedited film of the club eating at Cleve Lakes Park, Staten Island, made by Robert W. Ebbings.

Washington Society

A varied program was presented at the September meeting of the Washington D. C. Society of Amateur Cinematographers.

Wilbur F. Canine presented a novel method of making personal home movie titles. There was a newswell, vacation film, and a picture made with the new Anso-Cole movie film was presented by J. Donald Sutherland.

Philadelphia 816

September meeting of the 8-16 Movie Club of Philadelphia had a well balanced program. On the screen were shown an OWI film, a sound cartoon and a picture of the club's picnic. A special feature was the projection of Kodachrome slides made by members. There was also an exhibition of members' gadgets.



Official U. S. Navy Photograph

the war seems far
away tonight . . .

SUPPOSE you were a young fighter at the South Pacific. At your age, you'd be spending a lot of time with a girl—if you were back home. But home is months and miles behind you—and you're sick to death of men and uniforms wherever you look . . .

And then a "live" show planes in—with girls—girls who've come all the way from home to smile at you, to talk to you, to sing and dance for you . . .

They're grand medicine for homesick

boys, these lovely girls of screen and radio . . . so are the famous comedians, the vaudevillians, the dramatic actors, the dance bands, the concert stars . . .

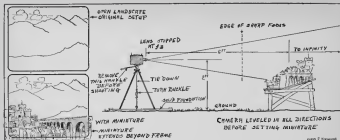
Like all the rest of these entertainment folk, the movie men and women often give up a good deal to go. They travel and work themselves ragged. Many are often in danger. They are serving gallantly, and with great satisfaction . . . making one of the important contributions of the movies at war.

EASTMAN KODAK COMPANY, Rochester, N. Y.

J. E. BRULATOUR, INC., Distributors
FORT LEE CHICAGO HOLLYWOOD

One of the best of
entertainment by
KODAK testifies to
the achievement of
the movies at war





Movie Tricks for Amateurs

By Glenn R. Kershner, A.S.C.

ALITTLE blue box, not unlike the other camera cases at the edge of the set. Painted on the top was the name of the cameraman, and under his name in big letters was the word **TRICKS**.

Out of this magic box of instruments and gadgets the cameraman has done almost unbelievable tricks in movie making. And speaking of tricks, the most fascinating of all is the use of miniatures.

Miniatures are replicas of practically anything you wish to name. Mountains, hills, oceans, waterfalls, cities, towns—anything that the script calls for. They are all built infinitely smaller than the original, but are built absolutely to scale.

There are two types of miniatures—stationary and moving. The stationary type includes houses, church steeples, cities, mountains, etc. The moving type includes tumbling rocks, fire, water, trains with smoke billowing from the smoke stacks, ships, etc. It is important for us to discuss the moving type of miniatures here, because the 16mm. camera cannot be operated at sufficiently high speed, which is from two to eight times faster than normal, to show the action of the miniature down to normal on the projection screen. So, we will dwell on the non-moving type of miniature in this article, and we will bet that once you start working with miniatures you will find it one of the most enjoyable experiences of your entire amateur movie work. We will bet that you will spend many an evening at your work bench fanning out miniatures which will enable you to make films such as you have only dreamed of in the past.

Anyone who can use a knife, chisel, saw and hammer can make miniatures. Sometimes we make them of cardboard;

sometimes of wood. You can do the same, and if you want duplicates, you simply make a plaster of paris mold, and cast as many as you wish. However, before you start making your miniatures there are a number of things you must have figured out.

Let's suppose you have discovered a very attractive bit of landscape with

(Continued on Page 151)

HYPERFOCAL DISTANCES

The hyperfocal distance is the minimum distance at which objects sharpness is obtained with a given diaphragm opening when the lens is focused at infinity. All objects at the hyperfocal distance and beyond will be in focus.

The hyperfocal distance for telephoto lenses are calculated for very critical work. For ordinary purposes it will be inaccurate at one-half the distance given.

Focal Length	F 11	F 16	F 22	F 32	F 45	F 63	F 90	F 128	F 180	F 256	F 360	F 512	F 720	F 1024
12 mm.	8'	5'	4'	3'	2 1/2'	2'	1 1/2'	1'	3/4'	3/8'	3/16'	3/32'	3/64'	3/128'
15 mm.	9 1/2'	6'	4 1/2'	3 1/2'	2 3/4'	2'	1 1/4'	1'	3/4'	3/8'	3/16'	3/32'	3/64'	3/128'
1 1/4"	27'	17'	12'	9'	6'	4'	3'	2'	1 1/2'	1'	3/4'	3/8'	3/16'	3/32'
1 1/2"	33'	21'	15'	11'	8'	5'	3'	2'	1 1/2'	1'	3/4'	3/8'	3/16'	3/32'
2"	48'	31'	22'	16'	12'	8'	5'	3'	2'	1 1/2'	1'	3/4'	3/8'	3/32'
2 1/2"	57'	37'	26'	19'	14'	10'	6'	4'	3'	2'	1 1/2'	1'	3/4'	3/32'
3"	69'	45'	32'	23'	17'	12'	8'	5'	3'	2'	1 1/2'	1'	3/4'	3/32'
3 1/2"	81'	53'	38'	28'	20'	14'	9'	6'	4'	3'	2'	1 1/2'	1'	3/4'

PICTURE AREAS (Approx.) covered by Film Lenses

Note: For camera distance from 1 to 9 feet, read the following table direct. For greater distances, simply make decimal point. Example: Area width for 1-inch lens at a 16 mm. camera is 2.45 feet at a distance of 16 ft. At 300 ft. it would be 24.5 feet, at six hundred feet it would be 245 feet.

Lens Focal Length in		Plane	Angle	Distance from Camera in Feet									
3 mm. Camera	16 mm. Camera			1	2	3	4	5	6	7	8	9	10
15 mm.	1"	Horizontal	56° 4'	47	3.35	2.05	2.75	3.40	4.07	5.00	5.43	6.12	6.72
		Vertical	27° 4'	40	2.60	1.60	2.10	2.50	3.00	3.40	3.80	4.30	4.70
1 1/4"	1"	Horizontal	31° 45'	61	4.0	2.5	3.40	4.20	5.00	5.80	6.50	7.20	7.90
		Vertical	16° 9'	29	2.8	1.8	2.4	2.9	3.4	3.9	4.4	4.9	5.4
1"	3/4"	Horizontal	14° 5'	28	4.0	2.5	3.4	4.2	5.0	5.8	6.5	7.2	7.9
		Vertical	7° 45'	15	2.8	1.8	2.4	2.9	3.4	3.9	4.4	4.9	5.4
1 1/2"	3/4"	Horizontal	11° 20'	11	2.7	1.6	2.2	2.6	3.0	3.4	3.8	4.2	4.6
		Vertical	5° 50'	10	1.9	1.2	1.7	2.0	2.3	2.6	2.9	3.2	3.5
2"	3/4"	Horizontal	8° 50'	10	1.9	1.2	1.7	2.0	2.3	2.6	2.9	3.2	3.5
		Vertical	4° 5'	9	1.5	1.0	1.3	1.6	1.8	2.1	2.3	2.6	2.9
3"	3/4"	Horizontal	5° 30'	10	1.9	1.2	1.7	2.0	2.3	2.6	2.9	3.2	3.5
		Vertical	3° 45'	9	1.5	1.0	1.3	1.6	1.8	2.1	2.3	2.6	2.9

Upper Table in "A", bottom in "B"

Aces of the Camera

(Continued from Page 151)

Brothers laboratory. One day the failure of slide making dawned on Fred with greater force than it had before, and he quit. He told Charlie that he was going to get a job in the picture business, the moving picture business. Posing in his work of snipping, Charlie asked Fred to get him a job in the motion picture business, too.

Fred did get him a job in the motion picture business. Scrubbing floors in the old Jim Crosby lab. It wasn't much of a job, but at least it was among somewhere in the direction Charlie wanted to go. And being of a curious and inquisitive nature he was able to absorb in a very short time all that a lab man had to know in those days. At any rate, when the Crosby lab folded shortly after that, he was able to present himself as being an all-around lab man.

He went to work for the Griffith lab, but he found the work there too specialized. It didn't give him the opportunity to poke around and learn all the sundry tricks of the trade that he was steadily adding to his store of photographic knowledge. The National Film Company lab, with only three men on the staff, offered him much more. Over there he could do everything. And he missed no opportunity to experiment. So many of his experiments with chemicals resulted in the nothing more than a series of horrible, obnoxious smokes that the head of the lab decided that Charlie was definitely an outdoor man. So they made him an assistant cameraman.

As soon as he got his hands on a camera it was pretty obvious that Charlie had made no mistake when he elected that impulse to get into the photographic business. And his familiarity with laboratory work and chemicals made him more valuable than ever. In less than six time he was working as a first man.

As a first cameraman he worked for one independent after another. His work was always good, and he was always appreciated, but the company always folded. It became monotonous. So much so that when he heard about an opening for an assistant cameraman at Famous-Players Lusky he decided to give up his hard won distinction of first man and take the job. Discretion, he decided, was the better part of valor. It was better to eat all the time as an assistant than only part of the time as head man.

It was a brave decision, and fortune favors the brave. The new studio was as quick to recognize Charlie's ability as had the others. Within six months he was working as a first man again.

He stayed with Famous-Players Lusky for five years, working with George Melford. His first picture, "Salome Jane," with Percy Marmont. And another he remembers particularly from that era was "Top of the World," starring Anna Q. Nilsson and James Kirkwood, which was notable in that it presented a technical innovation in split screen work for those days by putting one man's head on another man's shoulders.

When George Melford left Lusky for Fox he took Charlie with him. That was in 1922, and except for a period with MGM, he has been on the Fox lot ever since.

His activities while with MGM did a great deal to establish him as a globe traveler. He was identified with the "Tarzan" pictures, he went to Mexico to make "Viva Villa," "Mutiny on the Bounty" took him to Tahiti, and he spent seven months in China on "The Good Earth." He had an excellent reputation as an outdoor man, richly deserved, but rather embarrassing at times because of the disadvantages in Hollywood of being "typed."

His reputation as an outdoor man really began when he was sent out to get atmosphere stuff, within the continental limits of the United States, for scenes for "The Good Earth" which was being considered, at that time, for translation to the American scene. It was an idea that, fortunately for all concerned, failed to materialize; but which served to launch Charlie on his career as an outdoor man.

He visited some of the most lovely places in the American countryside, and to hear him tell it, the conditions were so unforgivingly perfect that only the roughest amateur would have fallen short on the assignment. Those who viewed the scenes were particularly pleased with the magnificent cloud effects that greeted every shot. Somehow they wanted to give Charlie as well as Nature credit, and from then on he was the outdoor kid. It was a reputation it took him years to live down.

While on the subject of clouds it would not be out of place right here to say that the Academy saw fit to present Charlie with a special citation at their last annual awards for his research and development of the device that makes it possible to put clouds of

any type into a cloudless sky without recourse to special effects; a device that was explained in detail in a previous issue of the American Cinematographer. Actually, he developed the idea some years ago while shooting "The Crossed Key" as a budget that would not permit special effects. It started as nothing more than an ingenious way to economically defeat the monotony of cloudless skies in an almost 100% outdoor picture.

Charlie Clarke is not happy just keeping ahead of things, he is always trying to anticipate events. At present he is experimenting with polarized light, and in microscopy. He is still trying to push the frontiers of photography back a little further, and he tackles his problems with imagination. Had he not been an Ace of the Camera he would have made a first class physicist.

He carries his imaginative, experimental ideas into his photography and is always ready to take the risk of trying for a new effect. Maybe he doesn't sell his ideas as well as some, but he keeps turning in excellent results by having the courage to be different.

Without having seen his recently completed "Thunderhead," which incidentally is the first feature picture to be produced entirely in the new Technicolor Monopack, Charlie thinks his best work was on "Four Sons," which he shot for John Ford that great director whose appreciation for the cameraman's place in pictures has added so much to his stature as an artist. Others think he was at his best in "Moonrise," "Hello France," or "Guadalcanal Diary."

Charlie's hobby is the history of the cinema, and he is as conscientious an historian as he is a cameraman. His collection is one of the finest in the

(Continued on Page 157)

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At left, S. O. S. camera crewing this photoflood lighted scene. Additional lights in the making of scenes are visible at some intervals. These lights were used in the making of "It's Up to You," reviewed on this page.

Review of an Industrial Film

By ED PYLE

Title: "It's Up to You."

Sponsor: Sears-Roebuck Foundation.

Producer: Paul J. Thompson, 599 South 8th Street, Yakima, Wash.

Type: Educational (Apple picking fundamentals).

Length: 548 ft. (34 min.) 16mm sound, Kodachrome.

Availability: address inquiry to producer for distribution in apple growing states.

This excellent film is an example of what can be done, in the industrial field, using blimps, Kodachrome, a good camera in capable hands, and inexpensive direct light recording equipment.

The credit titles indicate that the film was produced as a public service feature by the Sears-Roebuck Foundation, which is the only mention of the sponsor, hence a commendable and adequate amount of advertising. Cooperation is also acknowledged to the Washington State Emergency Farm Labor Committee, Washington State Board of Vocational Education, Extension Department of Washington State College, and the U. S. Employment Service.

Cast and staff consist of Paul J. Thompson—producer and photographer, featured player—Lorna Robertson, Nancy Nafley, and Fred Estensen, story—Ralph Whitford, music—DeWitt Harrington, technical advisor—Curtis Gilbert, and Alex Strasser, narrator—Don Kephlinger. Laboratory and music by the Calvine Company. Equipment used was an Eastman 16mm Special camera, blimped

for several time narration scenes, a kazo-onde dolly, and an Auricon NR-20 16mm film recorder.

Aimed at the group level of young high school students, the film is a simple expository treatment of the fundamentals of apple picking. Rhythmic is not only made that apple picking is a healthy form of profitable exercise, but is also an opportunity for high school students in apple raising states to do their part in the War effort, by taking the place of the regular crew, who are in military service, or in the war plants.

An opening sequence of spectacular but typical scenes of the great Pacific Northwest apple lands, provide the producer cameraman with opportunities to prove his ability. Color quality of the Kodachrome print is superior, and the photographic composition and framing of all scenes throughout the film, is top.

The best feature of the film is the adept and frequent use of close-ups and ultra-close scenes to clearly illustrate apple-picking technique. Particularly effective is the producer's use of blue photofloods, whenever current is available, to banish the shadows in the outdoor scenes, instead of using reflectors. This gives a more natural appearance to fresh faces, and avoids the harshness of reflectors.

The well written and enacted story follows some high school girls who are "incubated" by a newspaper ad announcing a meeting of prospective apple pickers. At the meeting, the proper clothing for pickers is demonstrated. This scene is in a school room, and the lighting for such a large room, was well

handled. A doll, shot here was smooth and effective.

A minor distraction in the meeting scene is the camera angle, after a good dolly shot down the center aisle, cutting off the head of the woman demonstrating the clothing. This may have been intentional in order to avoid lip sync narration, and permit off stage recording later.

Following the meeting sequence the young people are shown in an apple orchard receiving instruction in the fundamentals of apple picking, well illustrated with plenty of close-ups in which the color quality is superb. Then the gang goes to work, portrayed with some beautiful scenes of red apples being picked from lush green foliage, against a blue sky.

The narration is generally well worded, and the narrator's voice quality is good. However, there are a few seemingly long gaps in the narration, which possibly could have been written a little more clearly. The constant argue music comes in louder from the background to fill the gaps.

This reviewer has a personal aversion to constant musical background in simple educational or industrial films, particularly when the music is in conflict with the narrator's voice, as occurs several places in the subject film. Such conflict is too frequent in most industrial films where "music" is attempted. The subtle blending of voice and music is difficult to handle, hence music should be avoided unless it can be smoothly faded out during the narration.

The Auricon sound quality was good, although in a few places some "blooping" risk could have been used to good advantage, to avoid a click when sound sequences changed.

The many good points of this apple picking film, more than make up for the slight demerits discussed above. Sound teaching principles are used throughout and the film closes with an excellent review sequence, wherein the best close-ups and fundamental instructional points are repeated. An interesting closing message uses scenes of war workers and members of the armed forces, each shown eating apples.

S. O. S. Expands

Two floors in the building at 450 West 42nd Street directly across the street from its present location, have been leased by S. O. S. Camera Supply Corp. The concern has been expanding during the past two years, now occupying two floors at 450 West 42nd Street and a manufacturing plant at 453 West 46th Street, which is devoted 100% to war production.

Brulattour Organization Offers to Wrap, Address and Mail Christmas Gifts To Cameramen in Armed Forces

The Hollywood office of J. E. Brulattour, Inc., distributors of Eastman film, has just announced a service which should be of great value to the families and friends of cameramen and photographer technicians who are in the various branches of the Armed Forces of the United States, whether they are stationed in the United States or in foreign countries.

The Brulattour organization offers to wrap, address and mail all Christmas gifts which the families and friends of these men wish to send to them. If you wish to send a Christmas gift to any cameraman or photographer technician in the Armed Forces, all you have to do is take the gift to the Brulattour office, 6789 Santa Monica Blvd., Hollywood, with the following information: your full name and address as the sender; the full name, serial number and address of the person to whom it is to be sent; and a statement of the approximate value of the gift.

The Brulattour organization will furnish wrapping materials and will properly wrap and address the package, and

will then send it. This service is absolutely free, and the Brulattour organization furthermore will pay the postage charges. This service, it is pointed out, is a voluntary and cheerful one, aimed only at getting the Christmas gifts to the cameramen and photographer technicians on time and in good condition.

The announcement emphasizes the fact that neither the package nor contents will bear any identification of J. E. Brulattour, Inc. In other words, this is a service, purely and simply.

The time limit for mailing Christmas gifts to the men now overseas is October 15th. So all who wish to avoid themselves of this mailing service should get their gifts in to the Brulattour office before that date. If your gift goes to a member of the Armed Forces stationed in this country you may send it later.

Quite naturally, the Brulattour organization accepts its responsibility ends when the wrapped gifts are actually placed in the mail. A full record of each gift date received and when mailed will be kept for future reference.



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The Author of "BROWN BARRIERS" spent many years in the South Seas, long enough to know the natives and the islands intimately. He selected the inspiring island of Bora Bora, one of the Society Group for the background of this intensely interesting and authentic travel novel.

It was here in 1856 that a small boatload of men and a lone woman, survivors from the wrecked clipper ship Norbert K., worked their way through the opening in the foaming reef to what destiny held in store for them—Love, laughter, hate and romance told in gripping dramatic style.

"Kershner is at his best in writing of the sea and of ships that go down to the sea in accounts of a storm on the belly deep is the most reading that this reviewer has read."—*M. O. S.*, Ohio Arch. and Hist. Quest, Vol. 36, No. 4, 1937, p. 161.

He further weaves a tale so vivid that the reader almost believes that he has been aboard a vessel with deck hand, stowaway, and crew, and that he is—Bora Bora Island, French West Indies, Cook Island, Columbia, Ohio.

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Two New Leica Products Announced

A new 127mm, f/4.5 lens for the Leica camera will soon be available, according to announcement by E. Leitz, Inc. All American made, including optics and the specialized helioid focusing mount which couples directly with the built-in hinge finder of the Leica camera.

This new lens is for use in getting close-ups of distant objects—it produces images more than twice the size of those made with a standard 50mm. Leica lens, and will also produce portraits with much better perspective. The lens is highly corrected and makes very sharp pictures.

Another new Leica product to be released shortly is an Image-Erecting Universal View Finder. This has an adjustable mask to show the fields of view of lenses from 35mm to 135mm inclusive. There are click stops to insure positive setting for the different focal length lenses, and the finder has a parallax adjustment. High accuracy, ruggedness and compactness are also claimed for this new View Finder which is designed for use with the Leica and other cameras making negatives approximately 1 x 1 1/4 inches.

The bulk of the production of both of these new products will go to the armed forces, but there will be a small variety available for essential users in private.

Western Electric Oscillator

On September 1st a Western Electric publication well-known to the radio industry before the war as PICK-UPS once again made its bow under the new title, THE WESTERN ELECTRIC OSCILLATOR. Including a highlight cover done in the war theme by artist Paul Robbet, the publication presents 36 pages of technical and allied information of interest to broadcasting and electronic people. The editor is Will Whitmore with Vancro Hilliard, assistant.

In its initial issue THE WESTERN ELECTRIC OSCILLATOR carries a number of articles of significance to the radio industry. The lead story, "Radio Fights Its First War" by George de Mare, tells definitely how the men and women of the profession are standing up to their wartime responsibilities. The article is based on a comprehensive survey of individual broadcasting stations throughout the nation. Other titles include "FH Goes to War," "You Can't Win a War Without Radio," "A T & T Plans for Television" and "Seventy-five Years of Pioneering by Western Electric"—a two page spread of historic pictures starting with the founding of the Company and extending to its 75th Anniversary this year.

In addition to a profusion of interesting photographs done in the modern vein, the publication contains a dramatic spread of four full-page pictures in color.

High Efficiency Stereopticon

(Continued from Page 22)

erating in the same manner as that found in 35-mm background projection equipment, interrupting the light path, the shutter being operated in synchronism with the camera. Experimental work has been done using a shutter made of Alkide No. 2 heat-absorbing glass, which absorbs approximately 90 per cent of the heat and which is transparent enough not to have the disturbing flicker effect of a solid shutter (Fig. 3).

It might be said that one psychological advantage in using a glass shutter in stereopticon units is that the average viewer is not disturbed by shutter flicker on the screen which is always constant with the conventional type used in motion picture projection.

The following figures will indicate the conditions found without a shutter, with an opaque shutter, or with a shutter of heat-absorbing glass:

	No Shutter Per Cent	Metal Shutter Per Cent	Glass Shutter Per Cent
Photographic value of illumination	100	100	900
Light incident upon eye	100	63	91
Heat incident upon slide	100	63	70

It is evident from the above that the introduction of the metal shutter reduced the heat flux upon the slide by 37 per cent, and, at the same time, introduced the flicker characteristic typical of 35-mm background projection, whereas the heat-absorbing glass reduced the heat flux upon the slide by 30 per cent and caused a negligible flicker. With an increase of only 7 per cent in total heat on the slide, the shutter flicker was changed from a condition of 100 per cent illumination dropping to zero with the solid shutter, to a condition of 100 per cent dropping to approximately 66 per cent, under which circumstances the presence of the glass shutter could hardly be noticed. Obviously this freedom from flicker is of considerable value in exposure determination.

The sole purpose of the shutter, whether glass or metal, is the protection it affords the glass stereopticon plate from heat. The shutter motor is equipped with a magneto-type tachometer for determination of shutter speed when operating wild during tests and live-up operations. When shooting, the shutter motor is interlocked with the camera motor by means of a standard interlocking speed when operating with the camera motor by means of a standard interlocking distributor.

The preference for a heat-absorbing glass shutter blade over metal may be realized if the increase of heat transmission amounting to approximately 7 per cent will not result in damage to the slide, continue or breakage of the plate it is mounted upon.

The light path between the water-coil and field condenser unit is completely enclosed with a light-tight hood so that no appreciable leak-light is present. It has a convenient passageway cover for easy access to the shutter assembly (Fig. 4).

The field lens unit consists of 2 condensers mounted with the convex spherical curves face to face with the input and output plane surfaces to the outside. The colored slide is mounted on the output side, and the unit revolves around the optical axis through 180 degrees so the slide may be leveled up for the horizon line or angled either way at will.

The slide is held away from the face of the field condenser by a specially designed 4-point holder, constructed to allow for the smallest point of surface plate contact, and to allow a cooling air stream to pass between the condenser and plate, preventing heat transmission and resulting in a minimum of plate breakage.

A squirrel-cage type blower is mounted directly below the field condenser and plate holder assembly, capable of delivering 200 cubic feet of air per minute, the speed of which is controlled by a switch

and rheostat from the main control panel. A Venturi-tube principle of adjustment with directional air baffles located directly above the blower and under the slide, provides the best possible directional adjustment for both sides of the slide simultaneously.

The objectives used are apochromatic coated and consist of a 12-inch Astro F1 and 16-inch f4.5 Bausch and Lomb, which are quickly interchangeable in an adjustable focusing mount. When operating at approximately 225 amp. using 1600 volt positive cathode, the output of this equipment is in excess of 60,000 lumens.

The main operating panel is located on the right and operating side of convenient height on which are mounted all necessary operating switches and a 2-way "talk-back" speaker connected with the camera operating table ahead of the projection screen.

The whole unit is very portable, the base is all metal, built on the dolly principle and mounted on rubber tire casters. It weighs 1800 pounds, and is equipped with convenient gas and tilt mechanisms and adjustments which lock tightly. The base has 4 screw jacks which lock the unit solidly to the floor after being placed in correct stationary shooting position (Fig. 5).

It is ideal in operation for sound and is equally adaptable for both color or black-and-white stereopticon projection plates.

This whole problem of natural color stereopticons with respect to transparency process work is new and has required the most ingenious and cooperative efforts of various departments. While we do not claim perfection, we know we have achieved a reasonably

satisfactory result so far, which will improve with use.

The first step of accomplishment—that of color print duplication—was taken over by Earle Morgan and Ray Peck, heading up Paramount's Still Processing Department and they have, after many difficulties, ably surmounted most of the problems of copying, contrast control and color correction.

The second step and problem of transferring the duplicates has been very successfully accomplished by Barton R. Thompson of our Engineering Department, who has developed a rapid special control technique.

The number three step—that of engraving and contracting the unit—has been ably mastered by A. C. Zosha, Chief Engineer of Paramount Engineering Department, Wilbur Silverthorn, Larry Braunstein, and the personnel of the Transparency Department. Were it not for the intelligent effort and perseverance of all these technicians, our stereopticon would have remained a difficult problem.

We have two of these units and have already utilized them in single and dual-color projection. With the constantly increasing production of color motion pictures we feel we are on the right track to accomplish better results in color stereopticon transparencies.

New Filmosound Library Releases

The following new film releases of the Filmosound Library have been announced by the Bell & Howell Company:

FOLLOW THE BAND (Universal)

No. 5543 8 reels Rental \$17.50

Jolly chase comedy of town-bred-tutoring great farmer who toots his way into the exclusive Dairymen's Association via Broadway's bright lights. (Edith Quilan, Mary Beth Hughes, Leon Errol and "personal" hits by Frances Langford, Lee Carroll, Alvino Rey, Rita Marlow, King Baggot, Bombardier, King's Men). Available from November 14, for approved non-theatrical audiences.

ALEXANDER NEVSKY

No. 5794 5 reels Rental \$22.00

Kurosawa's symbolic epic of the Russian people's struggle against the invading German knights in the XIII Century, with a rich score by Prokofiev, camera by Tsuru and starring Nicolas Charvakov. The story is sufficiently elementary so that Russian dialogue presents no serious handicap.

COWBOY IN MANHATTAN

(Universal)

No. 5875 6 reels Rental \$17.50

Hard-pressed dramatic producer plays young Texan for a sucker and becomes involved in a unique "hard-to-get" buildup that turns a mediocre show into a great hit. Interesting and uniquely intelligent musical five new songs. (Rex Post, Frances Langford, Leon Errol, Walter Catlett). Available from November 21, for approved non-theatrical audiences.

Movie Tricks

[Continued from Page 148]

mountains in the background. There are beautiful clouds in the sky and in the foreground are rolling hills. You would like to make a film of that landscape, but you want a medieval castle, surrounded by a little village, on one of those rolling hills in the foreground. What do you do?

First you set up your camera on a tripod and select a pleasing composition. Through your view finder select the hill on which you want your castle and village. Next you must determine how large you will have to make your miniature castle and houses, and how far away from the camera you will have to place them. The two accompanying Tables, A and B, will explain this.

First, you must determine the hyperfocal distance of your lens selected for the shot (preferably a 1-inch lens). Test your light with your meter and see how far down you will have to stop the lens. Then consult Table A to see how close to the camera you must place the miniature and still be within hyperfocal distance of sharpness. Now take a tape measure and measure the distance from the lens to the miniature location, and mark the spot. Then consult Table B and see how wide the angle of the lens is at that spot. Then place a marker a few inches outside of both side lines. Within the markers you can construct, or set up, your miniature set.

By consulting Table A you will observe that if you are using a 1-inch lens and are stopped down to F8, anything five feet away from the camera is in focus to infinity. In Table B at five feet the width of the camera angle is 2.94 feet. Not very large, is it? Can you build a perfect little city in that small space, or would you prefer to make it a little larger, say six feet away, to make the work easier? If you want it larger simply determine the size you wish and then consult your two Tables for location and focus. However, before you start constructing the miniature I would suggest that you lay out your village on a drawing board absolutely to scale so that everything will be perfectly correct in the fall off of your perspective. Remember, never guess, but always build to correct proportions.

When you have built your miniature castle and village, then comes the great day—the day you set it up and photograph it. When the miniature is set up and you are ready to shoot, you set up your camera at the spot where the miniature looks best through the view finder. Then be sure you anchor the camera so it will not move a fraction of an inch. You are all ready then to take your light meter readings and shoot. Should you need a little soft light on

the miniatures put it on, but on a rule it is best to diffuse the light so that it matches the light in the distance.

After you have shot your first miniature shot you will be surprised at the results, and probably will become a miniature addict, for you can get results, after some experience that will simply astound you. After shooting the miniatures do not throw them away. Have them in your workshop or store on wires. Maybe by slight changes you can use them again.

I shall never forget the thrill I experienced when I made my first miniature. It was during the making of a picture of Henry Ford's life, back in 1918. I wanted a shot of his first workshop, the one in which he built his first Ford car. The building had long been destroyed. But I had a photograph of it, and set to work to make a replica of it in miniature. When it was completed I painted a background to match the old surroundings. Then I photographed it with my movie camera. I wound back the film, and by a series of double exposures had a man, who was a perfect double for Mr. Ford, walk several times in and out of the door, giving me a perfect establishing shot. The extension of working on the car were made at a later date.

This miniature success led me to many others, and around 1922 or 1923, while doing camera work at Goldwyn Studios

in Culver City, I introduced the use of miniatures in their productions. During the years since then, under exceedingly capable men, that department has become one of the studio's most important photographic units. The men in such departments are known as miniature or process men.

You serious amateurs will find working with miniatures a fascinating experience, and once you have mastered the art you will enjoy many happy hours, and will make many entrancing films of which you will no doubt be well proud. Incidentally, if you have any further questions, or meet problems you cannot solve in your first miniature attempts, please write me in care of the American Cinematographer and I will reply in person and try to assist you.

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Francis Doublier

(Continued from Page 342)

continued his camera and film, because they did not want this film shown, and arrested them. It took the French consuls' pleas to get them out of jail but the camera was not returned to him until six months later. However, Francis had another camera and went about photographing people and places without a trouble. He still cherishes these memories, but his heart sinks when he relates the great tragedy of Bodjadjé, France.

From here, he covered every city in Europe which had electricity. Covering early soundless events took Francis to many strange places. He went to Constantinople, Balkans, Romania, Athens, Cairo, Palestine, Bombay, Indo-China, Shanghai, Peking, Yokohama and then to Paris in 1905. In each city, he made

several rolls of film of about fifty feet each and when he ran out of his allowance of film, he would go about, grinding an empty camera on the unsuspecting crowd, for this was the way of attracting an audience. When they came to the auditorium and did not see themselves on the screen, they wanted to know why and were told that the film turned out badly and that they could not show it.

Until the Lumiere perfected the process, the camera was used for projection, as well as a printer, for on most occasions, it was necessary for Francis to print and project the local film so that it could be shown the day after it was made. When Francis relates the processing of the film, this is how he tells it: "First, I develop the negative in the cellan of the lawell, putting the film from a pad of developer, into a pad of water, then into a pad of hypos. Then I soak into the bathhouse, with my film, while the guests bellow for the bath and when I am finished, then I take the negative up to my room, put up some cord, and hang them, squeezing the film through a piece of cotton soaked with vodka to dry. When the negative is dry, I fit my camera for printing, then face the camera to the glass of electric light and press. Then I go back to the cellar, develop the positive, take it back to my room, hang it up on the cord and I use vodka squeeze and fan with a bad sheet for quick drying."

When he toured the continent, recording a documentary series of travel films and other subjects for the then fast growing film library of the Lumiere Cinematograph, the films were shipped back to Lyons, where they were processed in special developing tanks, printed and dried on revolving dryers, edited and later shipped to all parts of the world to be shown in movie theaters. There were times when Francis rented a theatre or large auditorium and he would hire a military band to play during the showing of the film. At yet, there were no titles, so the audience followed the film from printed programs between changes of the film and the band

played music to fit the mood, so that they knew how.

As you now know, the equipment was guarded from the curious and those with ulterior motives. When Francis loaded his camera, he covered it so that no one could see the mechanism. He would not leave the camera in his hotel room, he carried it with him wherever he went. He took it with him when he went out for his meals, he even took it with him when he went out with a young lady. He relates that once he had one arm around his lady and the other was tightly holding onto his camera case. Never did he allow his lady's curiosity to get the best of him, because it is not!

Francis Doublier traveled over one hundred thousand miles working and showing films in about four and a half years. When he wound up this tour and arrived at Lyons, he was twenty-one years of age. Believing that he had had his fun traveling and showing films throughout the world, he brought the apparatus into Louis Lumiere's office, put the equipment on his desk, and said to Monsieur, "I am thankful to you for the opportunity that you afforded me by letting me travel to all those wonderful countries. Here is your equipment, now it is time that I learn a trade, so that I can settle down and look to the future." Imagine that man. Taking into account the growth of this industry, he wanted to wash his hand of it all because he felt there was nothing further to be done in it; the whole world had seen the movies, now he wanted to learn a trade!

However, he stayed with the Lumiere, learning the manufacture of photographic materials. In 1902 they sent him to the United States to Burlington, Vermont, to open a manufacturing plant for paper, chemicals and plates. He went to Burlington, built the plant and manufactured photo materials until it was closed down in 1903. With the closing of the factory he decided to leave immediately for France and home. He traveled to Paris, where he met his brother, Auguste, who he met here, befriended him, secured a position for him as chief of the negative department at the Eclipse Laboratory in Fort Lee, New Jersey. Fort Lee was at that time, fast becoming the center of motion picture production.

At the great Eclipse Laboratory here in 1914 Francis had a narrow escape. He was carried out of the building unconscious when he attempted to rescue the negatives from the vaults. After that film he was hired as manager of the Solix Laboratory in Fort Lee. Two years later he designed and built the Paragon Laboratory in Fort Lee and in 1918 he went to New York City to head the Eclipse Laboratory on 33rd street. In 1923 he went back to Fort Lee as manager of the Palmdale Laboratory and in 1925 he became head of the Hiramshope Laboratory. At present, he is with Major Film Laboratories. To anyone who ever worked with him, he is known as the "Boss."

(Continued on Page 358)

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General Precision Acquires Control of Ampro Corporation



Ampro (left) Earl G. Hines, President of Ampro Corp. Right, Earl G. Hines, President of General Precision Equipment Corporation

GENERAL Precision Equipment Corporation has acquired control of Ampro Corporation of Chicago, one of the well known manufacturers of motion picture projectors for 16mm. and 8mm film. Earl G. Hines, president of General Precision Equipment Corporation, in making the announcement stated that the acquisition was for such, that as new stock of General Precision Equipment will be issued in connection therewith and that the present management of Ampro will continue in charge of operations.

Some of the subsidiaries of General Precision Equipment Corporation have long been the leading manufacturers of standard 16mm motion picture equipment for theaters but have not made 16mm or 8mm film equipment. In October, 1943, General Precision Equipment Corporation acquired all of the stock of Motion Picture Engineering Corporation of Chicago which company specializes in projection equipment for industrial and commercial uses.

"With the acquisition of Ampro Corporation, the motion picture activities of General Precision will now include apparatus covering not only the professional 16mm field, but also the requirements of 16mm. and 8mm. equipment for use by educators, industry and the amateur or 'home movie' enthusiasts," Mr. Hines said. "Thus the products will cover the complete range of equipment for motion picture projection. Other related equipment such as 16mm. and 8mm. cameras will be added when war activities cease and such development programs can be undertaken. During the war period the use of 16mm. motion picture film and projection equipment has been tremendously expanded since all branches of the armed services

have used it for training purposes, for extension teaching and for video instruction. The value of motion picture instruction films has long been recognized by some of the leading schools of the country. The successful use by the armed forces on a great and varied scale has shown educators and industrial concerns as never before the rapidly with which information can be imparted to groups of students by this method. Undoubtedly use of visual aids in educational programs will, when peace comes, be greatly stimulated by this experience."

There are approximately 15,000 16mm. projectors now available in United States schools and considerable expansion of this equipment, in some schools is the placing of projectors in all classrooms, is contemplated. The University of Chicago recently announced acquisition by purchase of all of the teaching films originally produced by Electric Research Products, Inc. and by gift from Eastman Kodak Co., all of the Eastman classroom films.

Some industrial companies have long used 16mm. film as sales stimulants and during the war period, training films for employees have aided in increasing production. It is believed that such use of motion pictures by industry will be greatly expanded in the post war period.

For the home or amateur use the demand for 8mm. silent movies and 16mm. sound and silent projectors was growing rapidly before the war. For the duration this market was frozen. With the improved equipment that will be available after the war, a considerable expansion is anticipated.

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Survival

(Continued from Page 39)

might find themselves, should misfortune overtake them during a fight. The film shows a fictional forced landing in remote bush country, and the glorious fallacies of eastern Canada provide a colorful setting for the story. A second sequence is staged amid snow-laden evergreens of a Canadian winter, the third illustrates air-sea rescue operations in the event of a forced landing by training or operations flights over the ocean. What to expect in the event of an emergency under these three principle sets of conditions is thus visualized for RCAF aircrew in training.

The three separate sequences are tied together by dialogue scenes in a typical sergeant's mess, with WO1 Ray Longard as the principal character, relating his experiences, and stressing the value of the RCAF test book instructions, as well as the emergency equipment supplied all aircraft on operations and training flights. Longard appears in each of the sequences, so he tells the story of what happened in each typical case.

When an aircraft runs out of gas over the northern "bush" country, Longard is at the controls, gives the order to bail out. One crew member makes a parachute jump before a suitable forced landing spot comes into view, the rest of the crew, stick with the aircraft for a crash landing.

RCAF ground technicians supplied realistic settings. For a crash landing scene, a damaged Debon was carted 10 miles, set up in the bush with appropriately broken trees and torn ground—and the whole made ready for shooting within two hours.

For a flight sequence, taking place within an aircraft, one was cut in half and delivered to Automated Screen Studios with workable flight instruments and controls.

It required some ingenuity to get a fighter pilot floating down into the sea. He was suspended from the boom of a naval craft, his parachute shroud lines secured to a steel ring, in 25-foot ocean waves he was dexterously swung about; if the lowering was timed badly, he might land on a hard steel deck among a mass of gear. At best, he would land in a rough sea at freezing November temperatures. He did—three times!

Spectacularly beautiful winter scenes

were taken in the deep snows of the Laurentians, as a crew from a "stranded aircraft" lived under primitive conditions for two weeks, grew frowsome beards, and sought wild rabbits which provided them with a meal, and skins which they fashioned into hats and used for protection of one of their number who was "injured."

While it was all play-acting for the benefit of the nation's pilots, they made the experience as real and current as the actual circumstances might be following a forced landing in winter.

The production crew on location for the winter scenes did more than follow the book of instructions. They lived the spirit of the suggestion that resourcefulness and initiative can win through most difficult conditions.

They saw rabbit runs in the snow, and experimented with several types of snares—and caught rabbits. Forcing a ship loop from aircraft were suspended three miles above a sea, they planted twigs to help guide the rabbit directly into their snare, and found it worked, in a highly satisfactory manner. They tried a "spinning snare" with fishing line loop suspended from a bent sapling. They coaxed an Indian "dead-fall."

"Action," recruited from aircrew of the RCAF, actually swam with full lots in near-freezing weather off the Atlantic coast, to demonstrate air-sea rescue technique, to point up the importance of "ditching drill" for aircrew being trained for sea patrol operations, and to show the use of emergency equipment developed for this purpose.

"The will to live is half the battle" declares the commentator. "Men have died without apparent reason after a few days afloat. Others have been adrift for eighty-three days and lived to tell the tale. Your life hangs on the fibre of your fighting spirit. The sea is formidable, but not unbeatable."

Under such circumstances, the knowledge that planes and ships and radio operators are straining every nerve to locate the "ditched" aviator will hold their hopes high. Therefore, the nation picture shows in some detail the wide scale of operations that go into effect when an aircraft is reported missing. One of the most interesting pieces of equipment shown is the new "Galileo Girl" radio that can be hand-crashed in a dinghy at sea to send the international distress signal. From this a "fix" can be obtained by receiving stations to plot the location of the dinghy, to send aircraft and crash boats speeding to the rescue.

The conclusion to be drawn from the film "Survival" for aircrew members of the RCAF are perhaps best summed up in these remarks of the commentator: "A forced landing anywhere is a challenge to survival. A successful outcome is the product of careful planning, faithful conservation, and intelligent cooperation. The maintenance of life is based upon those definitely established principles. The rules of survival cannot be dated with impunity."

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Acres of the Camera

(Continued from Page 24F)

century, and includes part of the 2800 Blackie collection and the Beta collection. Among other choice items he has the legal testimony in the suit that Edison brought, in 1895, against the American Mutoscope and Biograph Company for infringement of patent rights, and which resulted in the establishment of Edison's claim. This transcript contains pages of direct testimony from all the great movie pioneers, shedding a great deal of light on the birth and growing pains of an industry that has grown to such amazing proportions.

Another bit of information that turned up after a very brief perusal of Charlie's historical effects, and one that film writers found most satisfying, was the reason a reel of film was established at 1000 feet. It seems that when motion pictures graduated out of the melodramas, first as a novelty, and then as a "chaser," a chaser being something to empty the theater. The length of time a motion picture should run in a variety house was established by the simple procedure of estimating the average time of the average vaudeville turn: 15 minutes, or, at 16 frames per, 1000 feet of film. We hope that those of you who have worried about this small matter in the past will rest as peacefully with this information now that you have it as we did when we got it.

And incidentally, if those of you who read this have any sense of historical interest to the movies you could be assured of their preservation for posterity by giving Charlie Clark as a remembrance to add them to his fascinating collection.

Important Notice to Graflex Camera Owners

The war may seem nearly over to some people but a note from Kalart advises that increases in their production of war materials, combined with a shortage of skilled mechanics, has forced them to discontinue installation of the special synchronizing unit for the Graflex camera which they have been advertising and installing for some time past.

The special synchronizer is installed to operate with the focal plane shutter of most Graflex cameras and opens the field of flash photography to owners of this camera. Kalart advises that owners of this camera. Kalart advises that they expect to resume the installation as soon as possible and suggest that the readers of American Cinematographer write the Kalart Service Department at Box 1214, Stamford, Conn., before sending a camera for installation. Kalart has established a waiting list as soon as the service can be resumed, giving precedence to those on the list.



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$\frac{1}{2}$ "LIGHT WAVE"—after all surfaces of the several elements in a lens have been ground and polished to an accuracy of $\frac{1}{2}$ "light wave"—1/100,000 of an inch—the assembled lens is brought to a lens bench for study and adjustments. The microscope shows the image of a pinpoint of light about 200 feet away—it appears as a tiny star. The size, shape, and color of the star are any determining factors in judging the optical quality of the lens.



STARS BAD AND GOOD—At left a "bad" star, as seen in lens bench microscope. In a lens which passes muster, the star must be symmetrical in shape and color, not exceed a maximum size. Weird shapes and bright colors mean rejection. Star images photographed at 11" off axis.

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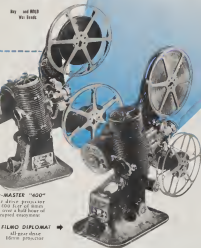
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